

To: Thomas, Kent[thomas.kent@epa.gov]
Cc: 'Gill, Darren'[DGill@fieldturf.com]
From: Walt Sanders
Sent: Fri 1/23/2015 8:28:56 PM
Subject: Connecticut Reaffirms Safety of Artificial Turf
[Circular Ltr 2015-02 Connecticut Reaffirms Safety of Artificial Turf.pdf](#)

Dear Kent,

As the Washington, DC counsel to FieldTurf, I wanted to follow up with you and your colleagues on our meeting at EPA regarding claims that exposure to synthetic turf products were allegedly the cause of certain types of cancer in young soccer players. During our meeting we provided you with scientific epidemiological studies that analyzed the potential health risks from exposure to synthetic turf.

We also stated that we would be willing to provide you with any further scientific evidence that would substantiate the impact of turf products on human health. However, we continue to believe that scientific evidence supports the safety of synthetic turf.

The Connecticut Department of Public Health (CT DPH) sent the attached announcement to all Connecticut local public offices announcing that CT DPH had evaluated the potential exposures and risks from athletic use of artificial turf fields and found “no scientific support for a finding of elevated cancer risk from inhalation or ingestion of chemicals derived from recycled tires used on artificial turf fields.”

The study evaluated five fields in Connecticut in 2010-2011 as part of a comprehensive investigation of releases from the fields during active play. This study was conducted as a joint project with the CT DEEP and the University of CT Health Center and was peer-reviewed by the

Connecticut Academy of Science and Engineering.

The study did not find a large amount of vapor or particle release from the fields confirming prior reports from Europe and the US. We put these

exposures into a public health context by performing a risk assessment. Most important, the risk assessment did not find elevated cancer risk. These results have been published as a set of 3

articles in a peer review journal and are available on the DPH artificial turf webpage

(<http://www.ct.gov/dph/cwp/view.asp?a=3140&q=464068>).

We met with you because various news stories suggested that soccer players and especially goalies may have an elevated cancer risk from

playing on artificial turf fields. This was based upon anecdotal observations of a university soccer coach. Reportedly the coach is developing a list of soccer players who have contracted cancer. However, the types of cancer are undocumented and so it is impossible to say whether they represent a common effect and there has been no reporting on how long the goalies played on artificial turf fields to see if there was plausible exposure and latency. There are many reasons why someone collecting a list of cancer cases may appear to find a cluster including the fact that when you have a

single-minded focus on finding cases you do not capture all the non-cases that would tend to disprove the cluster.

Documentation of an increased rate in soccer players would require an epidemiological study in which the total number who play on turf fields in a given region was also known so that a cancer rate could be established and compared to those that do not play on artificial turf fields. The current

news report does not constitute epidemiological evidence and thus is very preliminary.

We believe the Connecticut Department of Public Health scientifically based risk analysis presents a more realistic picture of the risk of exposure of synthetic turf products.

The Connecticut advisory states the following:

Our risk assessment did cover carcinogens that are known to be in recycled tires and the crumb rubber

used to cushion fields. Once again, we found there to be very little exposure of any substances, carcinogenic or not, in the vapors and dust that these fields generate under active use, summer

conditions. Background levels of chemicals in urban and suburban air from heating sources and automobile traffic are much more significant sources of airborne carcinogens. The fact that we sampled

5 fields (4 outdoor and 1 indoor) of different ages and composition suggests that the results can be

generalized to other fields, a conclusion supported by the fact that results were similar to what was found

in California, USEPA and European studies. Our study did not evaluate ingestion of the crumb rubber

itself as players are unlikely to ingest an entire rubber pellet. However, two studies, one in California

and one at Rutgers University did evaluate the cancer risk if children ingested a mouthable chunk of

playground rubber (10 gram), using laboratory extraction methods to estimate the amount of chemicals

that might become available in the stomach and absorbed into the body. Both studies found very low

cancer risk from this scenario (Cal OEHHA 2007; Pavilonis et al. 2014). Thus, CT DPH finds no

scientific support for a finding of elevated cancer risk from inhalation or ingestion of chemicals derived

from recycled tires used on artificial turf fields. US EPA has a similar position: "At this point, EPA does

not believe that the field monitoring data collected provides evidence of an elevated health risk resulting

from the use of recycled tire crumb in playgrounds or in synthetic turf athletic fields."

(<http://www.epa.gov/epawaste/conservation/materials/tires/health.htm>)

In summary, federal and state authorities have taken seriously the concerns that artificial turf fields may

present a health risk due to contaminants in recycled rubber. The best way to investigate these concerns

is via an exposure investigation. Studies conducted in Connecticut and elsewhere have shown a very

low exposure potential, *less than from typical outdoor sources of air pollution* (emphasis added).

The current news reports of a list of soccer players with cancer does not constitute a correlation or causality

and thus raises a concern that currently lacks scientific support. Thus, the CT DPH position expressed in 2011 at the

conclusion of the Connecticut study, that outdoor artificial turf fields do not represent an elevated health

risk, remains unchanged. For further information please contact Brian Toal or Gary Ginsberg at 860-

509-7740.

We hope this information will be helpful to you, and please do not hesitate to contact us should you have any questions.

Walt A. Sanders

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EHS Circular Letter #2015-02
(Follow up to Circular Letter #2014-26a)

DATE: January 20, 2015

TO: Local Health Departments and Districts

FROM: Brian Toal, Gary Ginsberg
Environmental and Occupational Health Assessment

RE: Recent News Concerning Artificial Turf Fields

Brief Video Clip for Local Health Departments – *Click Here* ☐



This letter and video clip are being sent to update you regarding the news story that has circulated since last spring regarding potential cancer risks at artificial turf fields. Various media outlets have continued to run this story and a number of local health departments have inquired as to its validity. Since many Connecticut towns have installed or are considering artificial turf fields an elevated cancer risk would be an important consideration. However, this news story is still based upon very preliminary information and does not change CTDPH's position that outdoor artificial turf fields do not represent an elevated health risk.

The Connecticut Department of Public Health has evaluated the potential exposures and risks from athletic use of artificial turf fields. Our study of 5 fields in Connecticut in 2010-2011 was a comprehensive investigation of releases from the fields during active play. This study was conducted as a joint project with the CT DEEP and the University of CT Health Center and was peer-reviewed by the Connecticut Academy of Science and Engineering. Our study did not find a large amount of vapor or particle release from the fields confirming prior reports from Europe and the US. We put these exposures into a public health context by performing a risk assessment. Our risk assessment did not find elevated cancer risk. These results have been published as a set of 3 articles in a peer review journal and are available on the DPH artificial turf webpage (<http://www.ct.gov/dph/cwp/view.asp?a=3140&q=464068>).

The news story suggests soccer players and especially goalies may have an elevated cancer risk from playing on artificial turf fields. This is based upon anecdotal observations of a university soccer coach (<http://www.komonews.com/news/local/Soccer-coach-Could-field-turf-be-causing-cancer-259895701.html>). Reportedly the coach is developing a list of soccer players who have contracted cancer. However, the types of cancer are undocumented and so it is impossible to say whether they



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represent a common effect and there has been no reporting on how long the goalies played on artificial turf fields to see if there was plausible exposure and latency. There are many reasons why someone collecting a list of cancer cases may appear to find a cluster including the fact that when you have a single-minded focus on finding cases you do not capture all the non-cases that would tend to disprove the cluster. Documentation of an increased rate in soccer players would require an epidemiological study in which the total number who play on turf fields in a given region was also known so that a cancer rate could be established and compared to those that do not play on artificial turf fields. The current news report does not constitute epidemiological evidence and thus is very preliminary.

Our risk assessment did cover carcinogens that are known to be in recycled tires and the crumb rubber used to cushion fields. Once again, we found there to be very little exposure of any substances, carcinogenic or not, in the vapors and dust that these fields generate under active use, summer conditions. Background levels of chemicals in urban and suburban air from heating sources and automobile traffic are much more significant sources of airborne carcinogens. The fact that we sampled 5 fields (4 outdoor and 1 indoor) of different ages and composition suggests that the results can be generalized to other fields, a conclusion supported by the fact that results were similar to what was found in California, USEPA and European studies. Our study did not evaluate ingestion of the crumb rubber itself as players are unlikely to ingest an entire rubber pellet. However, two studies, one in California and one at Rutgers University did evaluate the cancer risk if children ingested a mouthable chunk of playground rubber (10 gram), using laboratory extraction methods to estimate the amount of chemicals that might become available in the stomach and absorbed into the body. Both studies found very low cancer risk from this scenario (Cal OEHHA 2007; Pavilonis et al. 2014). Thus, CT DPH finds no scientific support for a finding of elevated cancer risk from inhalation or ingestion of chemicals derived from recycled tires used on artificial turf fields. US EPA has a similar position: "At this point, EPA does not believe that the field monitoring data collected provides evidence of an elevated health risk resulting from the use of recycled tire crumb in playgrounds or in synthetic turf athletic fields."

(<http://www.epa.gov/epawaste/conservation/materials/tires/health.htm>)

In summary, federal and state authorities have taken seriously the concerns that artificial turf fields may present a health risk due to contaminants in recycled rubber. The best way to investigate these concerns is via an exposure investigation. Studies conducted in Connecticut and elsewhere have shown a very low exposure potential, less than from typical outdoor sources of air pollution. The current news reports of a list of soccer players with cancer does not constitute a correlation or causality and thus raises a concern that currently lacks scientific support. Thus, the CT DPH position expressed in 2011 at the conclusion of the Connecticut study, that outdoor artificial turf fields do not represent an elevated health risk, remains unchanged. For further information please contact Brian Toal or Gary Ginsberg at 860-509-7740.

References

California OEHHA 2007. Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products. Prepared for the California Waste Management Board, January, 2007.

Pavilonis BT, Weisel CP, Buckley B, Lioy PJ. 2014. Bio accessibility and Risk of Exposure to Metals and SVOCs in Artificial Turf Field Fill Materials and Fibers. Risk Anal. 34: 44-55.

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